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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/736,661	12/14/2000	Arturo A. Rodriguez	A-6280	8279
7590	10/20/2003		EXAMINER	
Scientific-Atlanta Inc Intellectual Property Dept MS 4.3.518 5030 Sugarloaf Parkway Lawrenceville, GA 30044			AN, SHAWN S	
			ART UNIT	PAPER NUMBER
			2613	
DATE MAILED: 10/20/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. 09/736,661 Examiner Shawn An	Applicant(s) Rodriguez et al.	
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on Jul 28, 2003
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-30 and 32-45 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-30, 32-36, and 40-45 is/are rejected.
- 7) Claim(s) 37-39 is/are objected to.
- 8) Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

- a) All b) Some* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

- a) The translation of the foreign language provisional application has been received.

- 15) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Response to Reconsideration

1. Applicant's arguments with respect to claims 1-30, 32-36, and 40-45 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-11, 15-16, 18, 21, 25-26, 28-30, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kala et al (5,953,506) in view of Ng (5,262,854).

Regarding claims 1, 15-16, 21, 25-26, and 29-30, Kala et al disclose a video decoding method and a video decoding system/device for adapting to resource constraints, comprising the steps of:

receiving video input (Fig. 9A) by a decoding device (102);
memory (Fig. 10, 300) for storing video input received by the decoding device;
decoding a first portion of the video input at a first video decoding rate, and determine the decoding rate should be reduced (lower rate), and decoding a second portion of the video input at a second decoding rate while maintaining synchronization with the audio decoding rate (Figs. 16A3, 15B2C; col. 17, lines 25-55);
determination logic by the decoding device configured to determine whether a resource constrained mode is to be initiated (col. 17, lines 25-55); and

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initiation logic by the decoding device configured to initiate the resource constrained mode responsive to the determination logic (Fig. c; col. 17, lines 56-67; col. 18, lines 1-24).

Kalara et al does not specifically disclose foregoing decoding of portions of the video input received by the decoding device.

However, Ng teaches foregoing decoding of portions of the video input received by the decoding device (Fig. 4, 311; Fig. 5, 313; col. 5, lines 12-29) for producing reduced NTSC resolution images.

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a video decoding method as taught by Kalra et al to incorporate the concept of foregoing decoding of portions of the video input received by the decoding device as taught by Ng for producing reduced resolution video images, especially when the resource constraint mode is on.

Regarding claims 3, 18, and 28, Kalra et al disclose inadequate bandwidth availability (col. 17, lines 10-24).

Regarding claims 4 and 5, Kalra et al disclose an user interaction (col. 2, lines 18-50, adapting profiles).

Regarding claim 6, Kalra et al disclose reducing spatial resolution of video output (Fig 2B; col. 3, lines 60-62).

Regarding claim 7, Kalra et al disclose user interaction (User Profiles) causing graphics to be generated and output along with the video output (Fig. 2B).

Regarding claim 8, Kalra et al disclose receiving from a video transmitter data describing the received video input (20).

Regarding claim 9, Kalra et al disclose MPEG (Fig. 5).

Regarding claims 10 and 11, Kalra et al disclose decoding B and P frames (Fig. 9A, 102).

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4. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kala et al (5,953,506) in view of Tan et al (5,959,684).

Regarding claim 32, Kala et al disclose a video decoding method, comprising the steps of: receiving video input (Fig. 9A) by a decoding device (102); and determining by the decoding device that at least one resource is constrained (col. 17, lines 25-55);

Kala et al does not specifically disclose initiating a mode of repeating pictures responsive to the resource being constrained.

However, Tan et al discloses well known concept of repeating and skipping pictures (frames) (col. 3, lines 25-29).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a video decoding method as taught by Kala et al to incorporate the concept of repeating pictures as taught by Tan et al so that Kalra et could easily repeat or skip pictures as is known in the art responsive to the resource being constrained in order to produce reduced resolution video images.

5. Claims (2, 17), and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kala et al and Ng as applied to claims 1 and 26 above, respectively, and further in view of Cismas (5,646,693).

Regarding claims 2, 17, and 27, Kala et al disclose determining the resource constraint being initiated responsive to inadequate bandwidth availability (col. 17, lines 10-24).

The combination of Kala et al and Ng does not particularly disclose determining the resource constraint being initiated responsive to inadequate memory availability.

However, it is well known in the art to compensate for a limited memory resource.

Cismas teaches memory utilization for video decoding (Abs).

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Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a video decoding system as taught by Kala et al to incorporate the concept of compensating for a limited memory resource as taught by Cismas for determining the resource constraint being initiated responsive to inadequate memory availability.

6. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kala et al and Ng as applied to claim 1 above, and further in view of Tan et al (5,959,684).

Regarding claim 12, Kala et al disclose foregoing decoding of a plurality of frames (Fig. c).

The combination of Kala et al and Ng does not specifically disclose repeating presentations of decoded frames.

However, Tan et al discloses well known concept of repeating presentations of decoded frames (col. 3, lines 4-29).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a video decoding system as taught by Kala et al to incorporate the concept of repeating presentations of decoded frames as taught by Tan et al for repeating presentations of decoded frames to a user in place of the plurality of frames that are not decoded in order to synchronize output pictures of audio and video.

Regarding claims 13 and 14, decoded frames comprises I, P, and B frames. Therefore, it is considered an obvious feature to repeat either I, P, or B frames.

7. Claims 19-20 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kala et al and Ng as above.

Regarding claims 19-20, utilizing look-up-table (col. 11, lines 1-17) and a record keeping of a history of resource need are conventionally well known the art.

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Therefore, it is considered a quite obvious feature to determine the amount of additional resource according to a look-up-table or a history of resource need.

Regarding claim 22, not only it's obvious to maintain existing resource priorities controlling devices using the resources, Kala et al always maintains resource priorities.

Regarding claim 23, note that Kala et al's system can be used in a home computer for viewing videos by an user.

Regarding claim 24, nowhere in Kala's reference suggests or discloses de-synchronizing audio and video data during the resource constrained mode.

8. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kala et al and Ng as applied to claim 1 above, and further in view of Casavant et al (5,426,464).

Regarding claim 33, The combination of Kala et al and Ng does not specifically disclose having a first picture rate and a second picture rate that is higher than the first picture rate.

However, Casavant et al discloses the well known concept of 3:2 pull-down (24 to 60 Hertz) method, that effectively teaches having a first picture rate (24 Hertz) and a second picture rate (60 Hertz) that is higher than the first picture rate (col. 1, lines 44-68).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a method for adapting to resource constraints as taught by Kalra et al to incorporate the concept of having a first picture rate (24 Hertz) and a second picture rate (60 Hertz) that is higher than the first picture rate as taught by Casavant et al in order to effectively convert from film to video for a display on television.

9. Claims 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kala et al, Ng, and Casavant et al as applied to claim 33 above, and further in view of Tan et al (5,959,684).

Regarding claim 34, The combination Kala et al, Ng, and Casavant et al does not specifically disclose repeating presentations of decoded frames.

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However, Tan et al discloses well known concept of repeating presentations of decoded frames (col. 3, lines 4-29).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a method for adapting to resource constraints as taught by Kala et al to incorporate the concept of repeating presentations of decoded frames as taught by Tan et al for repeating presentations of a decoded picture in place of a picture that is not decoded in order to synchronize output pictures of audio and video.

Regarding claim 35, it is considered an obvious feature to repeat only five times if a subsequent picture is not decoded (design choice).

Regarding claim 36, Casavant discloses a first picture rate (24 Hertz) and a second picture rate (60 Hertz) that is higher than the first picture rate (col. 1, lines 44-68).

10. Claims 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kala et al (5,953,506) in view of Ng (5,262,854), Casavant et al, (5,426,464) and Tan et al (5,959,684).

Regarding claim 40 and 42, Kala et al discloses a method for adapting to resource constraints, comprising the steps of:

receiving video input (Fig. 9A) by a decoding device (102);

determining by the decoding device whether a resource constrained mode is to be initiated (col. 17, lines 25-55); and

initiating by the decoding device the resource constrained mode responsive to determining the resource constrained mode is to be initiated, including foregoing decoding of portions of the video input received (Fig. c; col. 17, lines 56-67; col. 18, lines 1-24).

Kala et al does not specifically disclose:

having a first picture rate and a second picture rate that is higher than the first picture rate;

repeating presentations of decoded frames (pictures); and

foregoing decoding of portions of the video input received by the decoding device.

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However, Ng teaches foregoing decoding of portions of the video input received by the decoding device (Fig. 4, 311; Fig. 5, 313; col. 5, lines 12-29) for producing reduced NTSC resolution images.

Further, Casavant et al teaches the well known concept of 3:2 pull-down method, that effectively teaches having a first picture rate (24 Hertz) and a second picture rate (60 Hertz) that is higher than the first picture rate (col. 1, lines 44-68).

Furthermore, Tan et al teaches well known concept of repeating presentations of decoded pictures (col. 3, lines 24-29).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a method for adapting to resource constraints as taught by Kalra et al to incorporate the concept of foregoing decoding of portions of the video input received by the decoding device as taught by Ng for producing reduced resolution video images, especially when the resource constraint mode is on, and also incorporate the concept of repeating presentations of decoded frames as taught by Tan et al for repeating presentations of a decoded pictures in place of a picture that is not decoded for synchronizing output pictures of audio and video, and also incorporate the concept of having a first picture rate (24 Hertz) and a second picture rate (60 Hertz) that is higher than the first picture rate as taught by Casavant et al in order to effectively convert from film to video for a display on television.

Regarding claim 41, the Examiner takes official notice that it is considered an obvious feature (design choice) to repeat only five times if a subsequent picture is not decoded.

Regarding claim 43, having an interlaced video picture output having a first set (odd fields) and a second set of display fields (even fields) are considered inherent features.

11. Claims 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kala et al (5,953,506) as applied to claim 43 above, and further in view of Boussina et al (4,216,504).

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Regarding claim 44-45, Kala et al does not specifically disclose a well known concept of copying from the content of the first set of display fields to the second set of display fields.

However, Boussina et al teaches repeating (copying) fields (col. 9, lines 12-38).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a method for adapting to resource constraints as taught by Kala et al to incorporate the concept of repeating (copying) fields as taught by Boussina et al so that the content of the second set of display fields is copied from the content of the first set of display fields in order to avoid jitter artifacts.

Allowable Subject Matter

12. Claims 37-39 are objected to as being dependent upon a rejected base claim 1 but would be allowable: if claim 37 is rewritten in independent form including all of the limitations of the base claim 1. Dependent claims 37-39 recite the novel features comprising the step of: retrieving a first set of video data from a memory component, wherein the first set of video data corresponds to a first video picture; scaling the first set of video data into a second set of video data corresponding to a second video picture that is smaller than the first video picture; transmitting the second set of video data to a display device, wherein the second set of video data is not stored in the memory component prior to being transmitted; and transmitting graphics data to the display device, wherein the graphic data is displayed contemporaneously with the second set of video data.

The art of record fails to anticipate or make obvious the novel feature as specified in these dependent claims. Accordingly, if the amendments are made to the claims listed above, and if rejected claims are canceled, the application would be placed in condition for allowance.

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Conclusion

13. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

- A) Sun et al (6,434,197 B1), Method and apparatus for down-converting a digital signal.
- B) Her (6,353,633 B1), Device and method for transcoding matrix of video signal and TV receiver employing the same.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn An whose telephone number (703) 305-0099 and schedule are Tuesday through Friday.

SHAWN S. AN
PATENT EXAMINER



SSA

October 12, 2003